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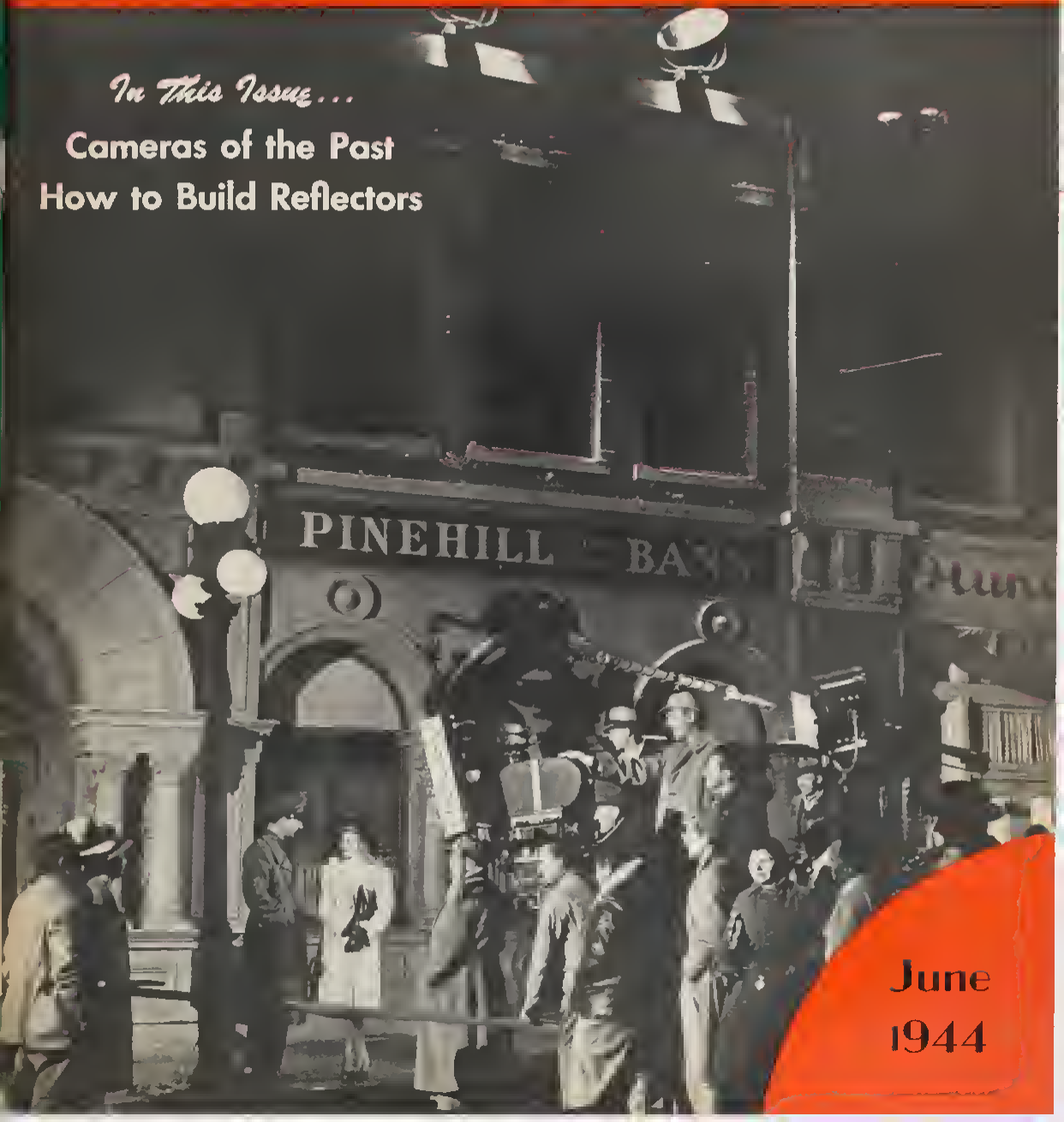
☆ THE MOTION PICTURE CAMERA MAGAZINE ☆

In This Issue...

Cameras of the Past

How to Build Reflectors



June
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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 25 JUNE, 1944 No. 6

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THE FRONT COVER SHOWS Director of Photography Tony Gaudio, A.S.C., lining up a shot for "Double Furlough" for Vanguard Films Inc. This picture, produced by Dore Schary and directed by William Dieterle, has Ginger Rogers, Joseph Cotten, Shirley Temple in the cast.

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Left President Leonard Smith of the American Society of Cinematographers Above Executive Vice-President and Treasurer Fred Jackman

Smith Heads A.S.C. For Second Term

LEONARD SMITH was re-elected President of the American Society of Cinematographers at the Society's annual election last month This will be his second term. Fred W Jackman was re-elected Executive Vice-President for his second term, and also was elected as Treasurer Joseph Walker, Lucien Shamroy and Charles Clarke were elected First, Second and Third Vice-Presidents, respectively Byron Haskin was re-elected Secretary, and George Folsey was re elected Sergeant-at-Arms

The Board of Governors for this year consists of the above named officers and John Arnold, John W Boyle, Arthur Edeson, Lee Garmes, Sol Polito, Ray Rennahan, John Seitz and Ralph Staub

President Smith is a veteran of the industry, having started his camera work more than 30 years ago with the old Vitagraph company. During World War I he was a cinematographer in the Signal Corps of the U S Army, and spent 14 months in overseas duty. Much of that time he was at the front Later he was attached to General Pershing's staff, and finally to President Wilson, in which latter post he filmed the signing of the Versailles Treaty For the past seventeen years he has been on the camera staff of Metro-Goldwyn-Mayer Studios, where he has made an enviable record as a director of photography in both black-and-white and color

In accepting the post of President for the second term, President Smith said, "I am extremely grateful to you men for re-electing me to this honored office for the second time for by your action you have shown your faith in me as a leader I promise you that I will not let you down In the American Society of Cinematographers we have the greatest camera organization in the world, and I shall never stop working for its advancement"

Executive Vice-President Jackman in accepting his re election paid high tribute to President Smith and to the members of the Board of Governors who he stated "have worked hard and faithfully, and have supported the efforts we have put forth during the past year."

"I assure all you members", continued Jackman, "that we will continue to maintain this organization as an outstanding educational and social guild which will always be watching out for the interests and well-being of every member For twenty-five years the American Society of Cinematographers has striven for the advancement of cinematography and cinematographers It will continue to do so"

The officers were installed at a dinner meeting in the Society's club house. Present were many distinguished guests and members of the Society who are now in the armed forces Among those who told of their experiences in the war zones were Major Elmer Dyer, A S C, just returned from the European war area, Major Frank Floyd, just returned from the Pacific area where he commanded a combat camera unit, Colonel William Keighly, Col Paul Mantz and Lt -Commander Al Gilks, A S C

All were loud in their praise of the work the men in the combat camera units are doing on all fronts where they are shooting pictures on land and sea and in the air

Membership Roll of the American Society of Cinematographers

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Camera's of the Past

By IRVING BROWNING

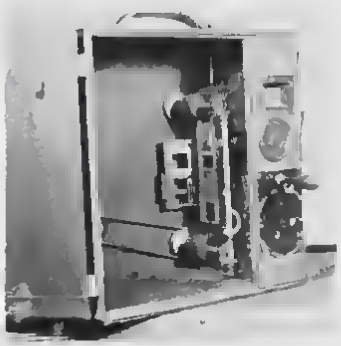


Fig. 1

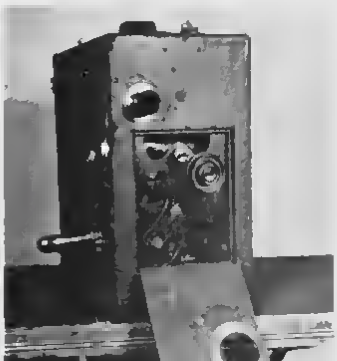


Fig. 2

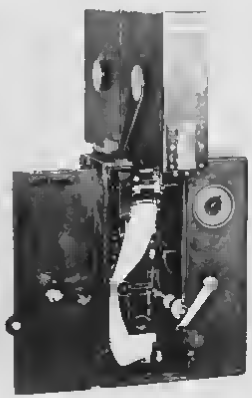


Fig. 3

THIS being the Movies Golden Anniversary made me feel a keener sense of values for my old historical camera collection which I have been collecting for more than fifteen years. Now more than ever do I know that the human interest these cameras represent brings back to us that period in our lifetime when we were young and thrilled by the bad man of the wild west, the siren, the slapstick comedy. They have played an important part in the changing of our time and customs. They planted the seeds from which this vast industry has grown. Today we rate high amongst the greatest of the world's industries.

Sometimes I'd like to believe that the old cameras I have would want to go home, if they could. WHERE WOULD THEY CALL HOME? Could it be the old Biograph studio in the brownstone on 11 East 14th street in New York, or the brownstone that housed both the Majestic and Reliance on Union Square, or the Imp studio on 11th Avenue and 43rd street, the Victor on West 43rd street, the Metro on West 61st street, the Edison in the Bronx, the Famous Players Lasky on 56th street, the Talmadge on East 48th street, the Pickford in a former skating rink on West 58th street, the Jene Gauntier who turned a little church into a studio, or would they head west to Los Angeles and make home at the Bison, the Essanay, the 101 Ranch, the Kalem, the Selig, the Keystone, the Vitagraph? What surprises they would encounter, finding garages where some of the studios once were, apartment houses where others once proudly hailed, and on the west coast, the tremendous studios, the hustle bustle of yesteryear on a grandeur scale. The silent screen actor depended on the grinding noise of the camera to do his acting, but today, the actor does his chores when all is quiet, and so the noisy cameras of yesteryear are no more part of today's production. Yet they have their place in the roster of the great of the past, as there is no doubt that they have earned their niche and are deserving of their place with the masters that have gone before them.

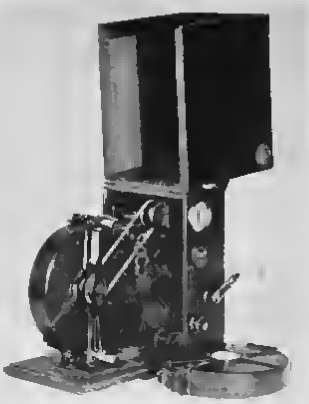


Fig. 5

Having been a cameraman for many years, I always had a sentimental spot for the old timers, when I came upon one of them, and always bought it. I now own some thirty odd makes from four countries which made them as well as they produced films in competition with one another for the world markets. Amongst the cameras I own are the best makes of France, Germany, England and America. The American cameras finally triumphed and today are the best in the world.

I do not claim to have the very oldest of the cameras, for those are in the Smithsonian Institution in Washington and a representative group of fine pieces I have seen in The Franklin Institute in Philadelphia. There are but few private collectors yet they are, like myself, responsible for the present existence of

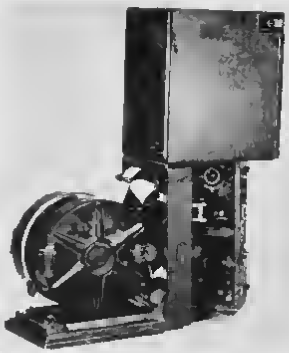


Fig. 4

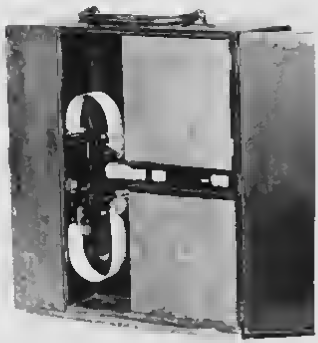
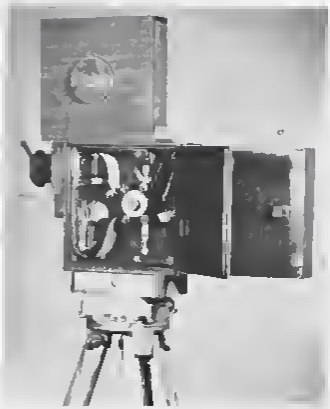


Fig. 7



Left Fig 6 Right, top to bottom Figures 10 11, 12 and 13 The author is shown in Fig 6

those pieces of equipment which will some day be seen in other Museums whose good fortune it will be to acquire them eventually

Of the French cameras I own, I have two examples of the large box type, as in Fig 1-2 The Pathe Studio Model with outside magazines as in Fig 3 The Pathe field model used by the studios as well as the newsreels as in Fig 4 The 28mm commercial model as in Fig 5. The Pathex 9½mm is also in my collection I also have the Debrie Interview which was used mostly by newsreel cameramen

Of the German cameras I own, I'm particularly interested in one which I have and which is a direct copy of the Pathe Studio Model It is the Carl Geyer studio camera, with a few refinements on the Pathe such as the magazines side by side with forward and reverse belts all set for either type of shot Fig 6 shows the Carl Geyer on the left and the Pathe Studio on the right I have the Eineman 200 foot camera and the 400 foot camera, Fig 7, the 200-foot. Then I have a 200 foot Eberhardt Schneider camera, originally manufactured in Germany, Fig 8

Of the English cameras I have many. In those early days, many of the best cameras came from England and were used in many parts of the world The English Prestwich was a most popular old timer and made in many versions The English standard roll of film was 300 feet in length and they made their cameras mostly standard for that length of roll, and the American standard was 200 and 400 feet rolls of film, and it was quite a while until the English camera came through with the 400 foot magazine. The standard Prestwich Fig 9, is the 300 foot model The Pittman Prestwich came later with its 400 foot magazines I have the Gaumont Prestwich with a magazine on top and on the rear, Fig 10 I have one Ensign 100 foot capacity, made with hand crank and for spooled film, same as used in the present Eyemo cameras, Fig 11 I have the well known Moy camera This Moy was the finest of the box type cameras and had the best precision mechanism of all the cameras of its type. It is of 300 foot capacity, and the one I own has been converted to a color process, subtractive process as the Kinemacolor process This one is said to have been a new experimental Kinemacolor camera, Fig 12

Another most interesting specimen in my collection is the Aeroscope Camera, the invention of Mr K Proszynski, a Polish inventor who worked in England, as this camera was made in England. It

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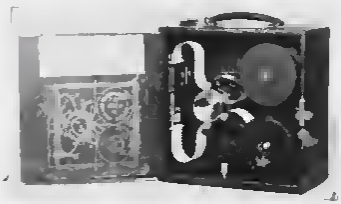
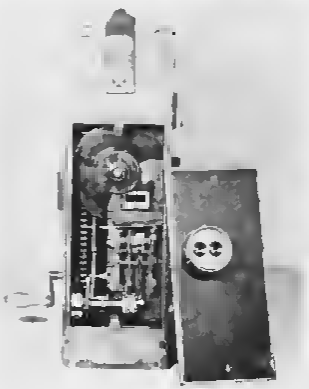




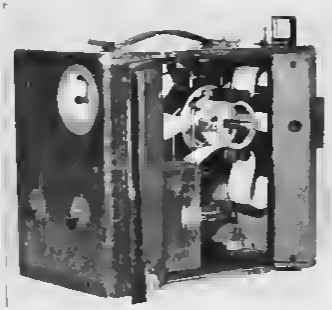


Fig 8

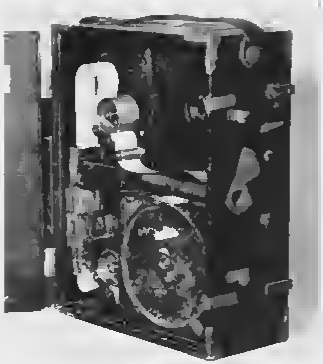
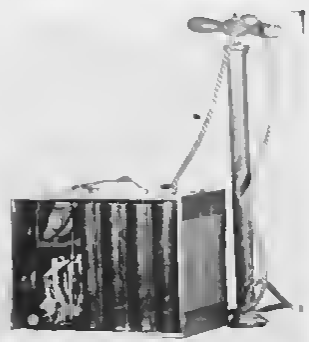


Fig 9



Aces Of The Camera

Harry Hallenberger, A.S.C.

By W. G. C. BOSCO

THERE is at least one member of the A S C who has achieved his goal in life And that's John Henry (Harry) Hallenberger From his snug harbor at Laguna Beach, within a stone's throw of the Pacific, he can sally forth to fish whenever his heart desires The frequency of his desires can be measured by the amount of fish in the diet of the Hallenbergers and their neighbors, who have practically never noticed the meat shortage. There is, we are told, a legend growing up in that haven of the artistic elite with regard to Harry's piscatorial prowess But like all legends, including the one about the swallows of San Juan Capistrano, we have no personal knowledge and only report what we hear In the interests of veracity, however, but without wishing to take sides in the heated discussions that are splitting into factions the previously harmonious and tranquil society of that seagirt paradise, we propose to tell both sides of the story One side has it that Harry's consistently large catches of fish can only be accounted for by the fact that he has stumbled on, or invented a new, irresistible (to the fishes) lure Having rifled his tacklebox at night in the interests of the sport, followed him at a respectful distance and peered at his activities from clefts in the rock, this group of contenders has come to the conclusion that Harry either, (1) promises the poor fish a screen test, or, (2) that he bares his shining cranium to the Sun and so dazzles the denizens of the deep that they leap right into the boat. The other side merely states that Harry stops at the fish shop on his way home At last report the controversy promises to be settled amicably with both sides composing their differences in common agreement that Harry, be he Laguna's premier fisherman or not, is certainly one of the country's best cinematographers, and an artist worthy of that city's Hall of Fame

Perhaps Harry has been telling them some of his stories Perhaps he told them how he was wafted into prominence way back in 1917 when he was assisting Charlie Rosher, who was photographing Mary Pickford in "Captain Kidd". It seems that it was Harry's first day on the set, and the first thing they found for him to do was to shoot a still of a kitchen Harry was a bit nervous, of course, and he wasn't too sure what he had to do, but he did manage to get the camera set up on its tripod and lined up with the lens facing in the right direction. Having accomplished that much he went off in search of someone who might be able to tell him what to do next But somewhere along the line he got sidetracked He forgot all about the still camera until, about four hours later, someone called for a still on another set Harry was sure his first day in the motion picture business was going to be his last, but hoping that no one would remember, he furtively withdrew the plate, and dashed off on his new assignment

The next day he waited for the blow to fall He wasn't a bit surprised when one of the big shots came in waving a print, and wanting to know who it was that took the still of the kitchen set Of course Harry knew that he had taken it, but he didn't volunteer the information right away because he clung to the hope that someone else might speak up And another thing, he had an awful time trying to control his Adam's apple, which kept bobbing up and down at an alarming rate But finally, after what seemed an eternity of silence, he found the courage to admit that he had taken the picture He was the man they were looking for And he started for the door "Well," said the big shot, "I want to tell all of you that this is the best still that has ever been made in this studio [illegible]" Harry sat down again, abruptly "[illegible] it's the best still I've ever seen . ." Harry swallowed convulsively and decided then and there to say his prayers more frequently "[illegible] it's perfectly exposed," the big shot continued enthusiastically, "and every detail is as sharp and clear as an etching Some of you guys should find out how this new guy did it"

They should find out! If Harry only knew! It was some time later that he figured out that the prize-winning still of his had been the result of the natural light seeping in through the pin-hole in the shutter during the four hours the camera had stood unattended on the set But at the time the incident only served to convince him that he had luck on his side even though he had a lot to learn about photography

A few days later he had to change the film in a camera For some reason the stuff gave him a lot of trouble. When the roll he was taking out of the camera fell on the floor he knew that that was definitely not the right procedure, but

(Continued on Page 208)

Television Picture Definition

By L. H. BEDFORD, O.B.E., M.A.

PICTURE definition, primarily from the television view-point, may conveniently be discussed in terms of the very well-known and somewhat abused television formula

$$f = \frac{I}{2}\,\frac{I}{T}\,Rn \qquad (1)$$

This formula purports to relate the required frequency band width f to the (net) number of scanning lines n, aspect ratio R, and Time T in which the net picture is scanned. It will be shown that only in one special case is the formula correct and that in other cases the question which it is supposed to answer has no meaning. If one may borrow the Irish idiom, it may be added that if the question had any meaning the answer would be wrong.

The derivation of this so-called classical formula is extremely simple. It is argued that the highest vertical definition which a set of horizontal scanning lines can resolve is an alternate black and white distribution at half-pitch equal to the pitch of the scanning lines. Therefore we should be able to resolve a similar but no finer distribution in the horizontal direction. The number of complete periods per line is thus $\frac{1}{2}Rn$ and the time for each line scan is $\frac{T}{n}$. Thus the fundamental frequency for this distribution is the quotient of these two qualities, whence formula (1).

The principal weakness of this argument was exposed in 1934 by Kell, Bedford and Trainer (Proc. I.R.E. Nov., 1934, pages 1246-1265). They pointed out that the vertical resolution was not in fact as high as it might appear, for although this distribution could be resolved when it happened to be exactly "in mesh" with the scanning lines, (Fig. 1 L.H.S.) if the raster were displaced vertically by half a line pitch, (Fig. 1 R.H.S.) the scanning lines would be reproduced uniformly at half brightness and a uniform grey field would result. In this case, therefore, the vertical resolution is completely lost.

Saturation Definition

Two possible deductions follow from this consideration. The first is that if this vertical distribution is *liable* to be rendered as a uniform grey, the pitch of the distribution should be so related to the acuity of vision that the eye would in any circumstances interpret it as nothing other than a uniform grey. In other words, given a proper figure for the acuity of vision, and a prescribed viewing angle, we are able to formulate a saturation value for the required number of lines. If this number of lines n is adopted then it can easily be seen that the formula

$$f = \frac{I}{2}\,\frac{I}{T}\,Rn \qquad (2)$$

gives the saturation frequency band f.

In contrast to the kinematograph case, in which the technique of the subject is such as to allow more than saturation definition to be provided, in the television case economic if not technical considerations force us to work materially below this value. It is in these circumstances that the question "What is the required frequency band?" has no meaning. The fact is that, short of the frequency required to saturate the horizontal definition, which frequency is no longer given by equation (1), the definition improves as the frequency band is increased.

On the other hand, if we invert the question to "Given an assigned frequency band f, what is the optimum number of scanning lines?" then an expression of the type of equation (1) gives the answer.

Kell, Bedford and Trainer introduced an empirical constant k_1 (less than 1) leading to

$$f = \frac{I}{2}\,k_1\,\frac{I}{T}\,Rn \qquad (3)$$

This constant k_1 is introduced to allow for the fact that vertical definition is in fact not so high as the simple argument made it appear; and to obtain equal vertical and horizontal definition, we may reduce the latter. They give an empirical value of k_1 as 0.64.

Interlaced Scanning

All the above argument refers to scanning of the sequential type. The present author, in 1935, independently examined the problem for the case of interlaced scanning. In this case a new effect arises, namely, line stroboscopy, (not to be confused with inter-line flicker), which leads in effect to another loss of effective vertical definition. If one compares a uniform sequential raster at 50 cycles with an interlaced raster of the same number of lines at 25 cycles and then determines the viewing angle at which the vertical brightness distribution is not resolved, one obtains the same answer for the two cases only so long as the eye is held absolutely stationary relatively to the interlaced raster. In the latter case as soon as the eye is allowed to move stroboscopic displacement of the two interlaced half-rasters occurs, which leads to a superposition on the apparently uniform brightness of vertical distribution of period twice the pitch line. To reduce this effect to inoffensive proportions it is necessary further to reduce the angle subtended by the line pitch by a factor k_2 empirically determined as 2.3. (Had this factor worked out to be a 1.2 this would have implied a zero advantage for the interlaced method of scanning.)

This factor has the same effect on the frequency formula as that of Kell, Bedford and Trainer, it must be noted, however, that the two factors must not be applied in cascade. The fact that the two constants k_1 and k_2 are so nearly equal is fortuitous. The difference is in fact less than the accuracy of determination of either, so that we may write a good approximation

$$f_s = \frac{I}{3}\,\frac{I}{T}\,Rn = \frac{1}{3}\,\frac{n}{T} \qquad (4)$$

as relating the optimum number of scanning lines n, to an assigned frequency band f_s. This formula applies equally to sequential or interlaced scanning, but is subject to the condition that f is materially less than f_s.

In the above argument the usual procedure has been followed of referring to definition in terms of the resolution of a black and white pattern of square wave-form, and then considering only the fundamental sinusoidal component. Whether or not the exact wave-form of this test distribution is significant, it is certain that the apparent definition of a television picture is mostly determined by the sharpness of the transitions in a square wave-form of a much longer period.

Resolution Chart

With the object of bringing the resolution test into more direct relation with the television problem, a "Resolution Test Chart" of a somewhat unusual form has been prepared. In this chart a square-wave brightness distribution is compared (a) with its first harmonic component (i.e. the fundamental), and (b) with its first two harmonic components (i.e. fundamental and third harmonic). One may now determine the following viewing distances:

d_1 The distance at which the horizontal distribution is unresolved in all cases.

d_2 The distance at which the fundamental can be distinguished from the square wave form.

d_3 The distance at which the fundamental and third harmonic can be distinguished from the square-wave form.

If p is the linear full period of the distribution, then angles

$a_1 = p/d_1$, $a_1 = p/3d_3$, and $a_2 = p/5d_2$

represent assessments of the acuity of vision based on fundamental, third and fifth harmonic resolution. In the earliest tests with this chart by a single observer a remarkable consistency between these assessments was obtained, but this was not borne out by subsequent tests with six observers selected at random. The spread of these results was in fact ex-

(Continued on Page 208)

Monopack Processes

By J. S. FRIEDMAN

THE trend in color processes at the present time is toward the use of monopack film. This is a multi-layered affair in which three emulsions are coated one on top of the other, and segregated from each other by filter layers. By a combination of filters and special sensitization of the individual emulsions, it becomes possible to achieve any desired type of color analysis, together with a physical separation of the three component units. These exist as monochrome dye images lying in layers one above the other, in exact registry. Ansco Color reversible film, Ansco Color negative film, Kodachrome, and Kodacolor are packs of this type.

Experience gained over a long period of time has taught us that for best color reproduction, color analysis should be made through a set of filters such as the A, B and C-5 Wratten filters. This is the procedure used by Technicolor in their successful reproduction process, and it is the standard to which monopack strives. An examination of spectrograms of the individual layer sensitivities indicates that up to exposure levels which encompass brightness ranges from 1 to 10, the quality of the separations achieved during the formation of the latent image corresponds very closely to the Technicolor standard. It is only when this range is exceeded that the green sensitive layer overlaps the others, but even here the degree of overlap is not too large.

We can therefore assume that the quality of the separations achieved during the formation of the latent image corresponds quite closely to the standard A, B and C-5 separations of the beam-splitting camera. Monopack film becomes, therefore, an ideal material for use in motion pictures, since it does away with the delicate and intricate one shot camera, and relegates the precision work involved in the making of separations to the precision laboratory where it belongs. That the industry is well aware of this is indicated in the interest shown by Technicolor and the Army and Navy in monopack film.

An exposed monopack film must be processed in such a manner that each of the latent images in the 3 layers becomes converted into a readily differentiable form. The best way to do this, short of physically separating the 3 layers into 3 separate films, is to convert the image in the blue sensitive layer into a form that will modulate blue light and not any other—that is, into a yellow colored image. Similarly, the image in the green sensitive layer must be converted into a magenta, and that in the red sensitive layer into a cyan. The procedure by which this is accomplished is the same in principle in Ansco Color reversible, Ansco Color negative, Kodachrome, and Kodacolor. They differ from each other only in details.

The underlying principle is the Fischer and Siegrist extension of the idea of "color development" previously proposed by Homolka. The extension is based upon the fact that the oxidation products of certain phenylene diamine and amino phenol developers, react with aromatic amino and hydroxy bodies, or with compounds which contain an active methine group, to form highly colored bodies. In general, cyan colors are obtained by the use of hydroxy bodies, yellows by the use of aceto acetic ester derivatives, and magentas by the use of heterocyclic rings such as pyrazolone or substituted acetonitriles. This classification is only a very general one, for it is possible to obtain yellow oranges from some pyrazolones.

In Kodachrome processing, the exposed monopack is developed to form a silver image. The red sensitive layer is then completely fogged by means of red light, then developed with a phenylene diamine developer which contains a coupler such as ortho-phenylphenol. The net result is that together with the positive silver image there is formed an equivalent quantity of a cyan pigment. Since only the red sensitive grains have been reversed, the resultant dye image will be a record of the red densities as they were reflected from every point in the original scene. By analogous means, it is possible to reverse the green and blue layers individually, and in that way deposit a magenta dye image in the green sensitive layer, and a yellow dye image in the blue. After the three layers have been individually reversed, the metallic silver is removed by well-known means, leaving an image composed of three superimposed dyes.

The processing of the two Ansco Color materials and of Kodacolor differs from this materially. In these, the emulsion layers contain the couplers. Thus in the red sensitive layer there is present a body such as ortho-phenyl-phenol. This must be present in such a form that it will not wander from one layer to the next during the coating operations or during processing. The body must be immobilized. The Ansco Color materials differ from Kodacolor in the manner whereby this immobilization is achieved.

In Ansco Color the coupler is made nondiffusing by attaching to it a very heavy group such as a resin acid residue or a higher fatty acid residue. This is achieved without making the body insoluble, so that in an Ansco Color emulsion the coupler remains molecularly dispersed throughout each layer. This tends to give the dye image the grain structure of the reversed silver image, so that an Ansco Color image should not be any more grainy than the image of a reversed positive film. This is true not only for Ansco Color reversible film, but also for Ansco Color negative film.

The first is developed by reversal. The exposed film is developed in a black-and-white developer compounded to allow a later reversal. It is then exposed to white light and color developed with a solution containing a para-phenylene diamine developing agent. The same developer is used to convert all three layers into their respective colors, since the couplers are already present in each layer. Hence only a single operation suffices. The removal of the metallic silver, followed by fixation, completes the process.

Ansco Color negative development is even simpler. The film is merely developed in a phenylene-diamine solution, the resultant silver is removed by a silver bleach, and the film is finally fixed.

In Kodacolor the immobilization of the coupler is done in a different manner. The coupler is first dissolved in a water insoluble but water permeable resin, and it is then dispersed in a gelatin solution. The gelatin is finally mixed with the emulsion. The insolubility of the resin prevents its diffusion from one layer to the next. The water permeability allows free access of the oxidized developer to the coupling agent so that dye formation is not hindered. The thought arises that the dispersion of a water insoluble resin in gelatin would cause a loss of light and definition by light scatter. This would be true only if the index of refraction of the resin particles were materially different from that of gelatin. Evidently this is not so.

In the Kodachrome developing solution, the couplers are in molecular dispersion. In Ansco film the couplers are molecularly dispersed in the gelatin layers, therefore are in true solution. Thus in both cases dye formation takes place immediately adjacent to the developed silver grain. The grain structure in the final dye image is closely allied to that of the reversed silver image.

In Kodacolor the couplers are dispersed in the layers as discrete particles. The oxidized developer must diffuse from the locality of its formation until it reaches the resin particle. The grain distribution of the final image is related, therefore, to the distribution of the relatively coarse resin particles, rather than to the reversed silver image.

It would be expected that Kodacolor would be less suitable for extreme enlargements than Kodachrome or the Ansco Color materials. Kodacolor is

(Continued on Page 200)

Note: This article reprinted from S M P E Journal.

Upper left Capt Ellis W Carter, former Pine Thomas cameraman awarded Air Medal and Presidential Unit Citation for work as an aerial combat cameraman Top right Major General J W Jones on inspection tour of AAF First Motion Picture Unit Above Major Frank Lloyd and Capt E E Bergholz former RKO cameramen just back from duty in the South Pacific

Cameramen Come Through

By ALVIN WYCKOFF, D. Sc., A. S. C.

AS THE Commanding officer of the First Motion Picture Unit, AAF, Culver City, California, Colonel Roy M Jones, a photo-enthusiast, works with his men to attain a high standard of efficiency The picture product finished at the Unit for training purposes, clears the way for men in training to learn more from a 10 or 20 minute film than they could gain from one instructor standing in front of a blackboard through several hours of explanatory lecture

Of the many excellent training productions reviewed by this writer, two were vividly impressive: "Position Firing" and 'Interrogation of Enemy Airmen '

"Position Firing" is a very instructive film that drew praises from the Chief of the Training Aids Division of the Army Air Forces. This is a training film done entirely in animation It is designed to aid the novice in learning the whys and wherefores of aerial gunnery

By use of a cartoon character, who by habit consults a crystal ball instead of the laws of mathematics and correct firing procedure, we see the reasons for missing an attacking enemy pursuit plane The narrator points out common gunnery errors such as neglecting to compensate for deflection, and not taking the forward speed of the bomber into consideration

The excellence of this diagramatic picture lies in the power of the visual impression that constantly projects itself into the mind of the gunner the instant he aims at his target

"Interrogation of Enemy Airmen" is a film of absorbing interest designed to facilitate the training of Air Interrogation Officers who act as Prisoners of War interrogators for the AAF It points out that each prisoner of war is a potential mine of vital information, illustrates the type of background the student will have to acquire in order to be a good Air Interrogation Officer, demonstrates the various techniques of interrogation, both direct and indirect, details the differences in methods of interrogating prisoners of various nationalities and closes with the reminder that, since all prisoners have human weaknesses it is up to the AIO to discover them It points out that a prisoner has only one defense, his silence, and that the advantage is always with the interrogator but he has to know how to use his advantage

Before the war cameramen confined their efforts to photographic "capturing" by shooting with film, never killing but oft-times getting killed

Little attention was given by the public that paid its admission to theaters all over the world to the trying efforts of cameramen as it watched the screening of thrilling events of the cameraman's product, nor did it think of the painful hours of risk, danger and suffering discomforts he had had to contend with to give that audience a fleeting hour of thrilling entertainment They were adventurous men thrilled with an adventurous calling to photograph, to get the picture was all that counted as they developed a sense that was devoid of danger

Today, in the midst of the war the same public seldom gives thought of the cameraman as it gazes enraptured upon the scenes of furious battles as released by the War Department

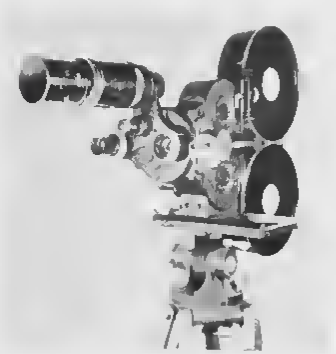
That fatal December 7th at Pearl Harbor laid a heavy load on cameramen as well as other technicians in other lines of duty But, the War Department had to have pictures, good authentic pictures of every war activity in the quickest, the shortest, possible time Cameramen and photographers were called and—they answered

(Continued on Page 211)

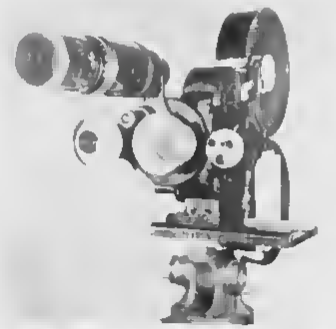
Pola Screen and Filter Holders

By FRANK duPATY

Bell & Howell Eyemo 71C A turret camera showing magazine motor and prismatic focusing magnifier



Eyemo 71C A turret camera without pola screen and filter holders



Eyemo 71C A showing pola screen and filter holders on 1 f2 2 f2 5 and 6¼ f3 5 lenses

HAVING an Eyemo turret camera with several lenses of different speeds and focal lengths, and wanting to use one size pola screen and Wratten glass filters for all of the lenses, I found that an Eastman Series VIII was the correct size for the largest diameter lens

For each lens I had made a slip-on filter holder, threaded to take a Series VIII filter retaining ring, so that I could use the Series VIII size polarizing filter and Wratten unmounted glass filters separately or in combination, on the small or large diameter lenses.

On the 24mm F 2 and 50mm F 2 5 lenses I had the adapter or rather slip-on filter holder offset, so that it did not interfere with the view finder field

On the 24mm lens I had to be careful that the offset did not bring the edge of the retaining ring into the photographic lens field, also not to obstruct the view finder.

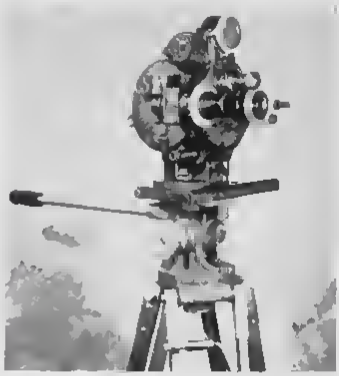
The 50mm lens had more leeway and the longer focal length lenses did not present the offset difficulties of the short ones

For an adjustable sunshade (not shown in the photographs) I used a slide form a 5 x 7 cut film holder, mounted on a rod with a universal joint and clamped on the camera

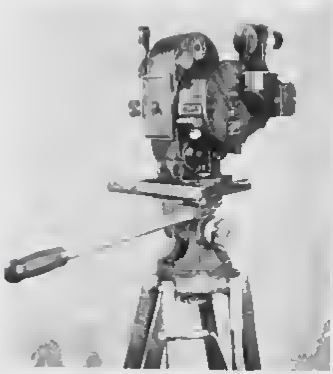
As stated above the idea was to use one size polarizing filter and Wratten unmounted glass filters for various diameter lenses and at the same time have an unobstructed view finder

The above idea may also be applied to a Filmo 16mm turret camera

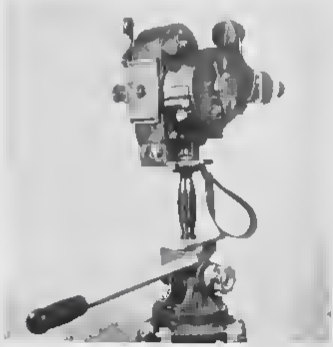
Another feature of this particular Eyemo turret camera was a removable prismatic focusing magnifier, which by merely releasing a catch it only takes a moment to slide out the magnifier and slide into its place a metal plate to protect the focusing ground glass When the magnifier was removed a ratchet key could be used which remained on the camera, instead of the ratchet crank which had to be removed after each winding of the spring Substituting a handle and strap for the alignment gauge, the camera reverted back to a flexible and convenient hand operated camera, less some bulk and weight On the door of the camera was mounted a Leitz rangefinder, which was removable Needless to say the magazine and electric motor were removed when using as a hand operated camera.



Eyemo turret showing side view of prismatic focusing magnifier



Eyemo turret showing prismatic focusing magnifier, alignment gauge Leitz range finder



Eyemo turret with prismatic focusing magnifier and alignment gauge removed showing ground glass cover ratchet winding key handle and strap in place The tripod was merely used to hold camera upright while being photographed

How To Build Reflectors

By GLENN R KERSHNER, A.S.C.

REFLECTORS are polished surfaces that reflect rays of light or heat. In the motion picture business we use them to reflect the rays of sunlight in connection with photography. We have dealt with this in previous articles in this magazine.

During the past weeks so many inquiries have come from all parts of America asking how to construct these reflectors that this article will be devoted entirely to this subject.

In motion pictures a rule, for convenience sake, makes reflectors four feet by four feet so that we get two out of a four by eight foot piece of quarter-inch three-ply board. This size we generally set on the ground and prop them up with a piece of round stick similar to a broom handle. We taper both ends and drive in a spike, saw off the head and file it to a sharp point so that one end will stick into the back of the reflector and the other end into the ground, boards or into cracks in the cement. Reflectors placed on the ground are called *low reflectors*.

To prevent the three-ply board from warping or bending we nail strips of wood (A) around the edges on the back. They are approximately 1x1½ inches wide, surfaced four sides, and mitered at the corners. We then nail pieces of the same size both ways across the center of the back. These prevent any bulging which would spoil a direct reflection from every square inch of the top side.

Around the edge of the top side, or shall we call it the face, we nail a strip, ing three eighths of an inch thick by one inch and a half, mitered at the corners and sanded smooth to prevent splinters while handling (B).

We now paint the edges and back to prevent weathering, but on the face we apply a couple of generous coats of shellac. When the last coat of shellac is still tacky, we very carefully lay small, very thin sheets of gold or silver foil (six by six inches square) and brush it smooth so that there will be no wrinkles whatsoever. We have learned a trick that is very helpful in eliminating too much glare. That is to leave about one inch of each sheet of foil standing straight up from the face (see illustration (C).

For the reflectors that we raise high on standards we reduce the size somewhat (D). We find that the width is best at three feet, four inches by four feet long, but instead of nailing strips on both sides, we use a strip of pine 1⅛ inches by 1¼. Into this we route a mortise ¼ inch wide and ¾ deep (E). Miter the ends so that when the three-ply is inserted into the mortise it will make a good solid frame. When satisfied that all fits firmly, glue it all together and nail with shingle nails. To make a better joining at the corners, dove-tailing is advised instead of the mitering.

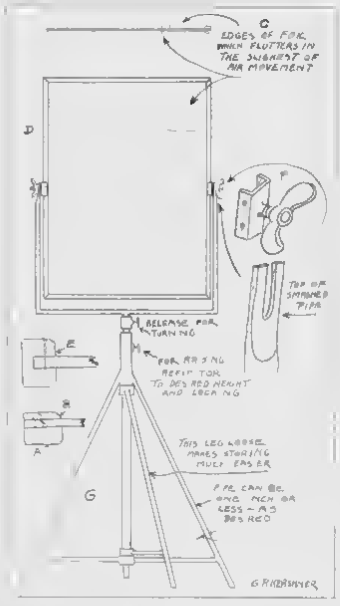
This method of construction will give you a *face* on both sides. Gold foil one side and silver on the other, while the half inch of edging on both sides will protect the surfaces from rubbing together which might injure or rub off the foil.

In order that a reflector can be raised high and placed at the proper slant, as well as to be able to turn it over very quickly to use the other side, a bridle is fastened half way up each side (F), with a three-eighth bolt welded to it using a large winged nut. A drawing tells more than a thousand words could explain, so I will make a rough sketch of some of these parts, also a stand to hold the reflector which you can make very quickly with pipe joined by welding (G).

Now that we have talked of the gold and silver reflectors and the stand to hold them, I wish to explain that we have occasions when we may need a very bright reflection. Then we use a *lead* reflector. Instead of the gold or silver foil, we use lead that has been rolled very thin and burnished and can be purchased in rolls of various widths. You can polish this to a very brilliant surface, or what we call HOT.

On account of war shortages, gold and silver foil is very hard to secure but there are surfaces we can have, such as aluminum paint or flat white paint. Tin, and new five gallon oil cans cut up, do a very good job of reflection.

In closing I might say you do not have to stick to these dimensions. Make the reflectors to suit your needs. If you wish big reflectors and can not get them into your car, cut them in two and hinge them together so that they will fold up like a book, always bearing in mind to fold the reflecting surfaces inside for protection. Finally, do not forget that rain or any splashed water is likely to spoil the reflecting qualities.



DeVRY COMPETITION WINNERS ANNOUNCED

KEEN was the interest, and close the competition for War Bond Awards in DeVry Corporation's 1944 Motion Picture Camera & Projector Design Competition. Winners include several members of the armed forces, three Canadians, and an occupational variety typical of the universality of the growing interest in motion pictures as a hobby.

"Details of the prize winning designs and mechanical suggestions," explains DeVry President William C. DeVry, "must await V-Day and the resumption of civilian motion picture camera and projector manufacture. It can be said, however, that the designs, ideas and suggestions submitted indicate keen interest in and definite opinions regarding post-war's motion picture equipment, particularly in the amateur field."

To George J. Heim, of 3330 North 11th Street, Milwaukee, Wisconsin, went first prize for the best motion picture camera design. To Frederick Arthur Amster, of 3515 Bunker Hill Rd., Mt. Ranier, Md., went first prize for the top projector design. He is a machinist, Amster a motion picture animator.

For camera design, Douglas G. Sites, of Havre de Grace, Md., a civilian gunner at the Aberdeen Proving Grounds, won second prize. To Robert C. Denny, 750 Vassar Avenue, Fresno, California, an electrical operating engineer, went third prize.

Second prize for projector design went to Jewell (Bud) J. Mulkey, of 1116 Third Street, Fairbury, Nebraska, a radio service man. Third prize for projector design went to Private Irving Krauss, whose home address is 1312 Sheridan Avenue, New York, N. Y., but whose present whereabouts is a military secret.

A few sailboats on the water

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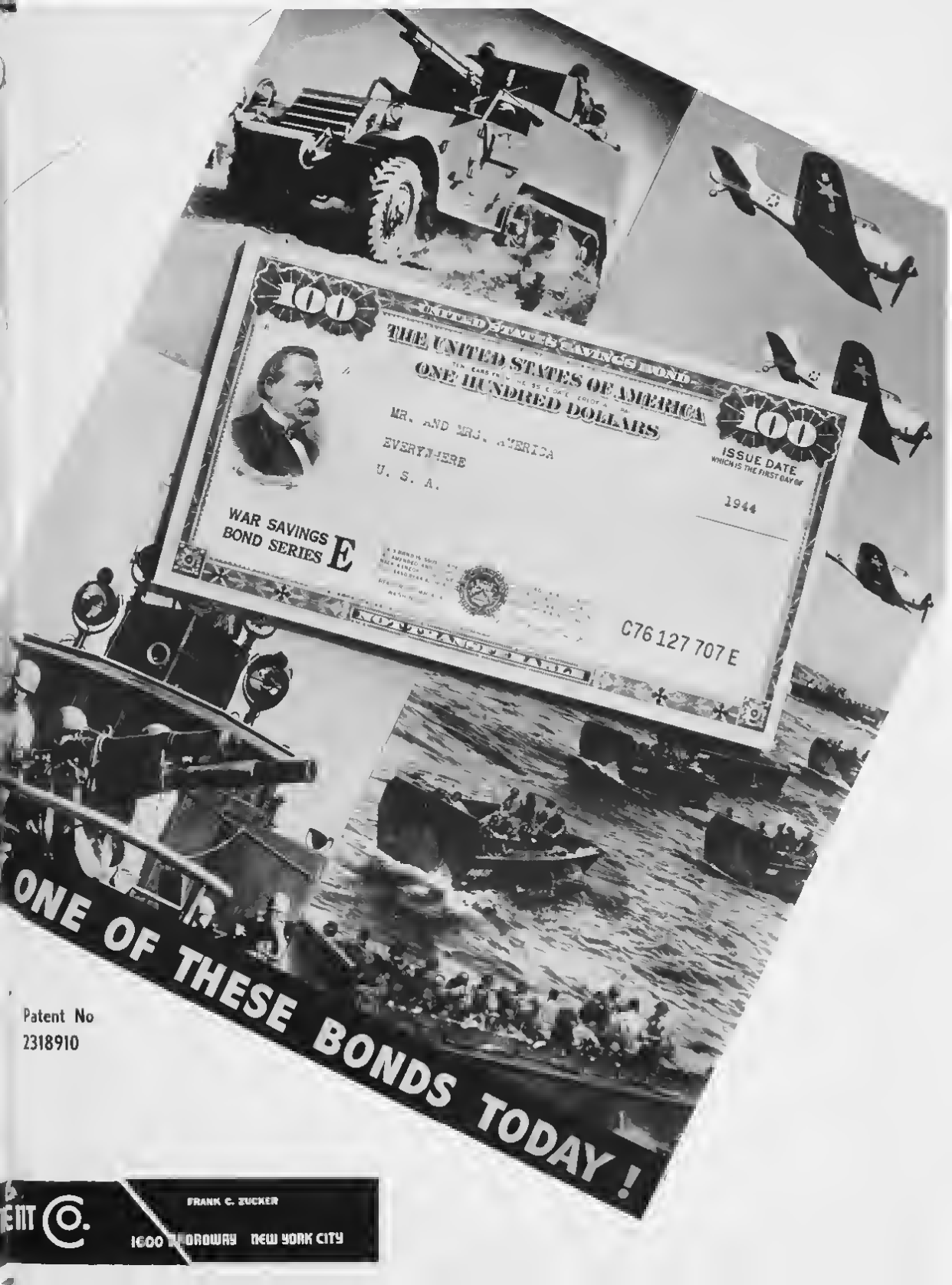
CAMERA EQUIPME



Patent No
2318910

Monopack Processes

[Continued from Page 192]

processed exactly like Ansco Color negative. It is extremely simple, and there is no reason why such processing could not be carried out by the individual operator.

The exciting thing about monopack film is that it makes every black-and-white camera a color camera. It was pointed out above that the original exposure gave a color analysis that approached the standard obtained by a beam splitter. This approach is destroyed after the film is converted into a colored transparency, be that a positive or a negative. It is possible, however, to correct for the flaws introduced by the color processing. How this can be done is discussed by Prof. C. W. Miller in his book, *Principles of Photographic Reproduction*. He uses a rather elegant mathematical method which gives promise of great utility in the science of color reproduction in general. The present writer discussed the problem from a straight-forward photographic angle in his *Color Photography* columns in *American Photography*.

Following Prof. Miller, we will designate a color in terms of its ability to absorb the red, green, and blue primary. We can therefore write 3 equations to represent the cyan, magenta, and yellow colors used in the reproduction process, thus

$$c = a_{11}r + a_{12}g + a_{13}b \quad (1)$$
$$m = a_{21}r + a_{22}g + a_{23}b \quad (2)$$
$$y = a_{31}r + a_{32}g + a_{33}b \quad (3)$$

Here c, m, y, r, g, and b represent cyan, magenta, yellow, red, green, and blue, respectively. The first equation states that the cyan dye absorbs the red light sufficiently to yield a density of a_{11}, the green light sufficiently to give a density of a_{12}, and the blue light sufficiently to yield a density of a_{13}. The set of three equations gives rise to a matrix which we call the color matrix,

$$(a) = \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \quad (4)$$

The ideal cyan dye is one which will absorb the red light to the extent to which the dye is present at any point, but which will not absorb any green or blue light. In terms of the elements of the matrix above, this means that the numerical value for the constant a_{11} should be something greater than zero, but for the constants a_{12} and a_{13} the value should be zero. The more removed the values are from zero, the poorer the cyan dye from the point of view of color reproduction processes. Similar situations hold for the magenta and yellow dyes, but now it is the constants a_{21} and a_{31} which must have values greater than zero and constants a_{23}, a_{22}, a_{21}, and a_{32} which must have values of zero. Thus an ideal set of dyes would give rise to a matrix which would have values of zero for all of its nondiagonal terms, and constants for the diagonal terms. Needless to say such dyes are unknown. That is why color distortion and degradation takes place whenever color reproduction is attempted.

Consider a color transparency which contains beside the image of interest, also an image of standard color. This can very well be a gray of density 1.00, a color which reflects or transmits only 10 per cent of the red, green, and blue primaries. The color can be represented by the equation

$$1.00r + 1.00g + 1.00b \quad (5)$$

where r, g, and b represent red, green and blue. In all color processes, the attempt is made to image a gray scale correctly. This means that a gray of density 1.00 will be reproduced as a gray of density 1.00. Suppose it requires a cyan dye concentration of x, a magenta dye concentration of y, and a yellow dye concentration of z to yield a gray of density 1.00 through each of the three separation filters. Then we must have

$$xa_{11} + ya_{21} + za_{31} = 1.00 \quad (6)$$
$$xa_{12} + ya_{22} + za_{32} = 1.00 \quad (7)$$
$$xa_{13} + ya_{23} + za_{33} = 1.00 \quad (8)$$

The elementary principles of algebra tell us that x, y, and z can have but one value which will satisfy the 3 equations. Therefore the problem of choosing emulsions which will correctly image a gray scale is a solvable one. We choose our emulsions so that upon equal exposure and identical processing, the cyan, magenta, and yellow dyes will be present in the ratios x-y-z.

The problem which we have set for ourselves is to determine the conditions under which separations from a color transparency will approximate those of a one-shot camera. We have pointed out above that each dye image is a close approach to the image of one primary color as it is present in the original. Thus if we can copy each of these without any interferences from the others, our object is achieved. To do this we must know the densities each of the 3 dye images present to the separation filters, when they are present in an amount necessary to yield a gray of density 1.00. This is not an impossible photographic problem, so we can assume it to be known. Let us suppose that the following equations represent the data:

$$c = x_{11}r + x_{12}g + x_{13}b \quad (9)$$
$$m = x_{21}r + x_{22}g + x_{23}b \quad (10)$$
$$y = x_{31}r + x_{32}g + x_{33}b \quad (11)$$

When we pass the light transmitted by the red filter through the cyan layer, the beam will be modulated. The original beam had a cross section every point of which had the same intensity. After passage through the cyan layer of the transparency the cross section was no longer uniform in intensity, but the intensities varied from point to point in accordance to the pattern imposed by the cyan dye image. This we define as *modulation*.

When the light passes through the magenta layer, it will again be modulated, although to a much smaller extent, since the value for the constant x_{21} is, as a rule, much smaller than the value for x_{11}. Hence upon the other pattern, there will be superimposed the pattern of the magenta layer. To the extent to which modulation takes place during the passage of the red light through the magenta and yellow layers, color distortion takes place.

If we concentrate our attention again upon our standard color patch, the gray with a density of 1.00, we know that we want our copy to image a red density of 1.00. This means that we want our red separation to copy the cyan layer at this point of the transparency in such a manner that upon printing it will yield a density of 1.00.

The cyan image at this point has a density of x_{11}. Upon passage through all three layers, the density actually copied will be $x_{11} + x_{21} + x_{31} = 1.00$. Therefore we must do something which will convert the sum $x_{11} + x_{21} + x_{31}$ into x_{11}. The procedure which accomplishes this is termed masking, photographic addition and subtraction. Addition is achieved by registering a positive image with a positive, and subtraction is achieved by registering a negative with a positive.

In our case subtraction is called for. We must subtract from the color transparency the values $x_{21} + x_{31}$, where x_{21} represents a negative of the magenta layer, and x_{31} a negative of the yellow layer. A simple way to do this is to make two exposures upon the same emulsion, one with green light to copy the magenta layer, the other with blue light to copy the yellow. The exposures are of such duration that the ratio of the green latent image to that of the blue will be $x_{21} : x_{31}$. The mask is then developed to a gamma which is equal to $x_{21} + x_{31}$. This constitutes the mask for the red filter separation. The masked transparency will have completely neutralized the densities x_{21} and x_{31} in the magenta and cyan layers, so that they will no longer modulate the red light imagewise. Only the densities in the cyan layer will give such modulation and at the point where our present interest lies, this modulation will be a measure of the term value x_{11}. In a similar manner we can make masks which will serve for the other two separations.

In the case of the red and blue separations, this double exposure is not necessary. The curves for the magenta and the cyan dyes intersect in the regions of their high absorptions. Let us suppose that they intersect at the point corresponding to a wave length of 590 mμ. This means that light of this wave length is absorbed by the two layers in equal quantities. To the right of this more light is absorbed by the cyan image, and to the left more light is absorbed by the magenta. Thus by a proper choice of monochromatic light we can vary the ratio of the cyan to magenta images in any desired proportions. We desire a ratio of cyan to magenta that is equal to $x_{13} : x_{23}$. The yellow and magenta curves intersect somewhere in the neigh-

(Continued on Page 210)

More Power for You

Another Amprosound Model for Larger Audiences

There is an Ampro 16 mm projector for every need—from living room to huge auditorium. Here is Model UA for instance, compact, portable, thoroughly tested in the educational field, with sufficient output to provide adequate volume for audiences up to 2500. Has many additional features including triple action tone control that permits complete mixing of sound from film, phonograph and microphone.

When Ampro resumes production for civilian users—Model UA, or its equivalent, will again be ready to deliver more power for you! Write for latest Ampro catalog of 8 mm silent and 16 mm silent and sound projectors.

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THROUGH the EDITOR'S FINDER

A FEW months ago we asked our readers to tell us what articles they would like to see in the Cinematographer. A few vague letters resulted. So, again we asked you to tell us what you want. But will you please be as explicit as possible. Give us specific problems you want us to write about. Give us concrete ideas, and we will do our best to deliver the goods.

IN THE March issue of this magazine we printed an article by Le Roy G. Phelps, of the Princeton Film Center, about how he "Akelevized His Cine Special." It was an extremely interesting story, and we suggested at that time we would like to hear from other readers who have done "home-made" jobs on their equipment.

In this issue we have another by Frank du Paty.

We hope this will inspire more readers to send us their experiences. We will gladly print them, and from reader reaction, we know the readers of the magazine will be happy to read them. So, come on now and let's hear what more you camera enthusiasts have done to improve your equipment.

IN the May issue of the CINEMATOGRAPHER we printed an article about Thomascolor, written by Alvin Wyckoff, describing its appearance on the screen and explaining in a general way how it works. This article was printed because it is the policy of the magazine to bring to its readers all developments in the photographic field—in other words to keep abreast of the times.

Unfortunately, from some sources has come the inference that the American Cinematographer and the American Society of Cinematographers, by the printing of this article, was recommending Thomascolor, in other words was "giving it the green light." It has also been suggested that Thomascolor is commercially "impractical" because a special projection lens has to be used to project it on the screen. Mr. Wyckoff explained that special lenses had to be used.

Actually, Mr. Wyckoff's article was a job of news reporting, and not an attempt to "sell" the color system. The American Cinematographer never endorses any product, except War Bonds, neither does the American Society of Cinematographers. Therefore in printing the news article about Thomascolor neither the magazine nor the Society were endorsing it. The magazine simply printed the observations of the author, who is not connected with Thomascolor, and *who was paid for his article by this magazine.*

In Memoriam

IT IS with extreme regret that we report the death of Lt. Comdr. Harold L. "Winnie" Wenstrom, U. S. Navy, for many years one of the most prominent members of the American Society of Cinematographers.

"Winnie" was one of the most popular members of the society, and had long been rated one of the top flight directors of photography in Hollywood. He started his career with the old Metro Company in New York in 1914. In 1924 he joined the photographic staff of Metro-Goldwyn-Mayer Studios in Hollywood, and remained there until America entered the present war when he joined the Navy. He spent considerable time at one of the combat areas where he contracted pneumonia. Weakened from illness, he died in Washington shortly after returning from active photographic duty at the front.

In his passing the American Society of Cinematographers lost a beloved member and the motion picture industry lost one of its finest cameramen.

WHENEVER funds are needed for a worthy cause members of the motion picture industry are never found wanting. And in this year's Red Cross Drive members of every branch of the film industry in Hollywood have again come through in a magnificent manner.

A total of 22,715 individual donations were made by Hollywood players, writers, directors, producers, talent agents, cinematographers, film editors, sound technicians, musicians, grips, electricians and other workers for a total of $644,557.35 for the Red Cross "Invasion Year" appeal.

This is truly a fine gesture—more than half a million dollars to help cure for our boys in the service. But this is only a small part of what the men and women of the film industry are doing in this war. They have played a big part in putting across the big bond drives, they are sending entertainment to the troops in all parts of this continent, and scores of players are going right to the battlefront to carry entertainment where it is most needed. Here and there we find a member of the film industry whose actions make unpleasant headlines in the newspapers, but as a whole Hollywood people are honest to God folks who are in there pitching with all they have, and never turning a deaf ear to the needy.

IN NO previous war have cameramen, both motion picture and still photographers, played such a prominent part as in the present world conflict. No matter where the fighting front, there are cameramen alongside our fighting men making a lasting pictorial record of the event.

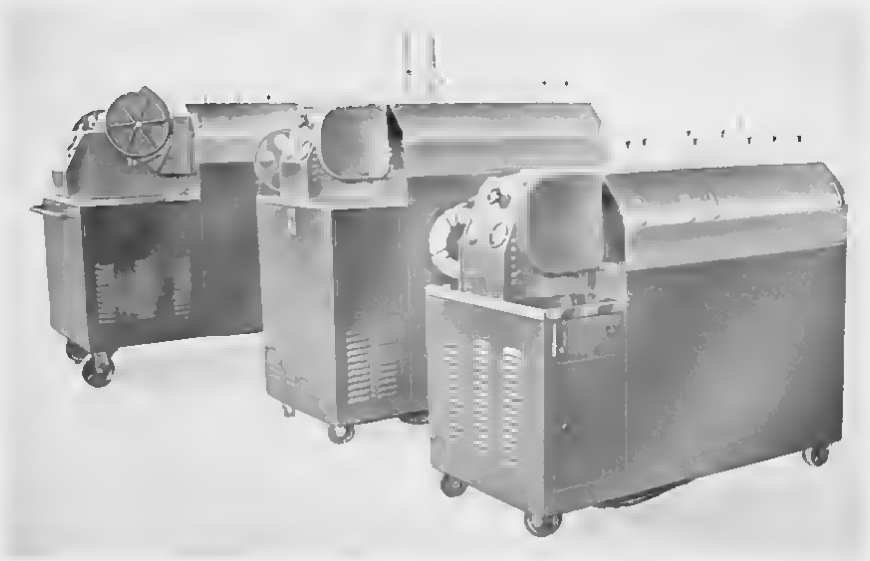
While we read much about the deeds of our aircraft pilots and their gunners and bombardiers, most of us fail to realize that in many of those aircraft are cameramen shooting pictures instead of bullets. On the ground, plodding along with the foot soldiers are other cameramen. When the war is over perhaps the cameramen will receive a little of the praise that they so justly deserve, and which they do not get in the excitement of humans slaughtering humans.

ALTHOUGH most of us are still staggering under the blow of tax payments recently made, we hope that every reader of this magazine not only is continuing to buy war bonds as in the past, but are increasing their investments in these bonds that are so vital to the winning of the war.

With the invasion of Europe just around the corner, and with the tempo of the war against the Japs constantly increasing, more and more vital supplies are going to be necessary. This means more bond buying. It may mean sacrifice on the part of civilians. If it does, so what! Millions of our boys are not only sacrificing their jobs, but are giving their lives, their legs, their arms that we might help free a world from the ideas of a mad man and a race of squint-eyed murderers. Let's all buy more bonds and hasten the victory.

The Houston Corporation

11801 W. Olympic Blvd.
Los Angeles, 25, California



Three Houston machines, each designed for a specific job.

In the illustration above, the machines were needed for a variety of uses.

One organization wanted reversal 16mm processing equipment of high capacity. Their choice, the machine on the left.

Another organization needed negative developing only. They selected the middle machine.

A third group wanted a machine for reversal, negative developing, and positive developing—high capacity not required—their needs completely satisfied with the machine above pictured on the right.

A fourth group required a 16mm negative and positive developer, editing and printing equipment, dark room for loading and printing, and fully portable. See our August advertisement for details.

FROM CAMERA TO SCREEN – HOUSTON

Motion Picture Studio and Laboratory Equipment — Developing Machines — Printers — Camera Cranes and Dollies
Miniatures — Mechanical Sets — Engineering and Design Work — General Machine and Jobbing Work

AMONG THE MOVIE CLUBS

Washington Society

"The Army Goes Over", a film of the first World War highlighted the May meeting of the Washington Society of Amateur Cinematographers. Also on the program were scenes made by C. M. Wilcox in the Amazon area, and some excellent pictures of Florida by Ralph Griggs.

Southern Cinema Club

Members of the Southern Cinema Club turned their May 1st meeting into an enjoyable picnic. They met at the mountain cabin of Dr. Norman Jarvis at Carbon Canyon. Everybody brought his own lunch, and the club furnished the coffee.

L.A. 8mm. Club

Six monthly contest films were shown and graded by the judges at the May meeting of the Los Angeles 8mm. Club. The films and grades were:

"Coming Events" by C. G. Cornell, 295 points.

"Aquarium" by Mr. Boaz, 262 points.

"At the Lake" by Mr. McEvers, 261 points.

"Around the Town" by Mr. Dietz 242 points.

"Horse Show" by Mr. Boaz, 241 points.

"Hawaii and the Marshal Islands", by Wm. Reed, 240 points.

Brooklyn Club

Meeting nights for the Brooklyn Amateur Cine Club have been switched to the first and third Wednesdays of each month. Films shown at the May 3rd meeting included "Churches on Parade" and the fourth in the series of making better movies by Kenneth Space, namely, "Film Editing".

On May 17th, guest night, the following were screened: "Lend Me Your Ear", "Pointless Foray", "Flowers of the South", "Summer Rhapsody" and "Junior Does His Bit".

Minneapolis Movie Party

The seventh annual movie party given by the Minneapolis Cine Club on May 5th presented a program that members and guests will long talk about. This is the film bill of fare that was presented: "Minneapolis From the Air", "Pulpwood Goes to War", "Our Daily Bread", "Birth of a Blossom", "Juvenile Expressions", "Pals", "Mexican Memoirs", "Food for Freedom", "A Mediterranean Cruise", "First Aid vs. Worst Aid", "Majestic Mexico" and "The Inside Story". And all this in Kodachrome.

Chicago Camera Club Salon

Forced by conditions to suspend its annual salons for several years, the Chicago Camera Club now announces another open exhibition, to be designated as the Chicago Camera Club Salon for 1944. The exhibit will be held from November 6 to December 9. An effort will be made to secure entries from foreign countries, despite war conditions.

Utah Cine Arts Club

Screening of three films, and a splicing demonstration featured the May meeting of the Utah Cine Arts Club. The films were, "The Birthday of a King" by Pete Larsen, "Moon Over Sun Valley" and a "Clinic Film". Kermit Fullmer gave the splicing demonstration, and F. L. Lamar spoke on sound reproduction.

La Casa Club

Five films made up the film fare of the May meeting of the La Casa Movie Club of Alhambra, California. As an added attraction, R. A. Battles gave an interesting descriptive demonstration on gadgets.

The films screened were "Southern California Scenes" by W. R. Wyatt, "Monument Valley" by D. A. Powell, "Sierra Sojourners" by R. A. Battles, "South of the Border", a Walt Disney film, and "Laguna Beach and San Juan Capistrano" by Edward Harmon.

M.M.P.C.

James W. Moure, continuity editor of Movie Makers Magazine, was special guest of the Metropolitan Motion Picture Club at its May meeting. Four films were screened. They were "Shadow Bones" by Frank Gunnell, "Horse and Buggy Days" by Charles J. Ross, "Dear Boys" by C. M. DeBevoise, and "Ice Follies—1944" by Emerson Conklin.

New members announced by the club secretary are Norriss Harkness, Lt. Paul E. Kohler, Jr., USNR, Joseph E. Kovar, J. E. Prisk, J. C. Smith.

Philadelphia Cinema Club

A charming film, "Springtime in Charleston" by B. T. Barnard headed the program of the May meeting of the Philadelphia Cinema Club. The film, in Kodachrome, takes you on a delightful trip through the famous Middleton, Magnolia and Cypress Gardens, as well as the old quarter of Charleston. Beauty in every scene with appropriate music and narrative.

Two other films were also shown. They were "Tamarack Trails" and "Sahuaro Land".

Congratulations, Syracuse!

Last month, the Syracuse Movie Makers started a new phase of trying to help in the present war effort. Previously they have taken films of various types and put on shows for the service men in the different barracks in and around Syracuse. Recently, most of these barracks were either put on a "stand by" basis or closed all together. Consequently, at the request of Capt. Donald Sanford, M. D., and head of the 52nd General Hospital Unit in England, (Dr. Sanford is a member of our club), they are taking pictures of the families of this unit from Syracuse and sending these pictures to their husbands overseas. It seems that although most of the wives of the Unit's members have 8mm. projectors, and cameras, there are no 8mm. projectors in England—at least not in the sector that the Unit is located in. Therefore, in as much as the Unit has a 16mm. projector available, they are taking about from 50 to 100 feet of either B&W. or Kodachrome film of each family in their homes and after processing, editing, and titling are sending them overseas in 100 foot reels for their husbands to see.

"The plan is simple," says Lisle Conway, "in case other clubs might like to copy it. We furnish four men, a cameraman, a man on the lights, a man to read the meter and check the focus, and another as an extra to help move furniture and act as a grip. These men, the cameras and lights are furnished free in the city. Also transportation in the city is furnished by the club. For those families outside the city, we furnish the cost of the gas and the family furnishes the gas coupons necessary to get there and back. If the family has film available in 16mm., they furnish it, otherwise we obtain the film for them and they pay the cost price of it.

"Most generally the wives of the units will call us up on the phone and give us a series of dates that will be all right for us to take pictures on in their homes. We then select one of these dates so that we may cover two homes in one evening and also furnish a full crew conveniently for us. Last Wednesday, we went to Cazanovia (about 25 miles from the city) and made 100 feet of Dr. Sanford's family; his mother, wife, and 2½-year-old boy. In addition we covered another family of the unit in Cazanovia. This service is not limited to families of the club members, as there is only one club member in the entire Unit from Syracuse—and we plan to shoot all of them. We hope that by doing so we may help in some small way, the furtherance of the war effort."

Cameras of the Past

(Continued from Page 189)

is the first automatic mechanical camera which ran by air compression. Illustration Fig. 13 shows the air chambers and little engine and a bicycle pump which was used to pump the air in the chambers. These chambers held 50 lbs. air compression. Fig. 14 shows the film side of the camera. This camera is no larger than the Pathe Inside magazine camera. Then I have a British made 200 foot camera for the local newsreel cameraman, with regular, single and reverse crank. This has no name plate, but I'm certain it is made in England, as in Fig. 15.

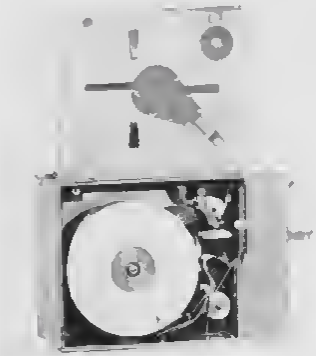


Fig. 14

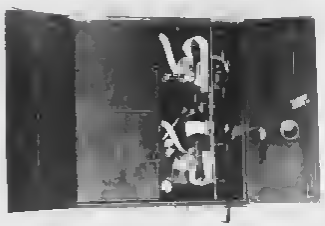


Fig. 15

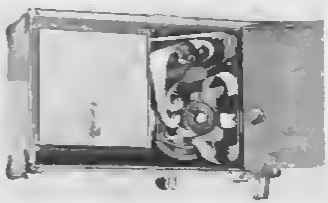


Fig. 16

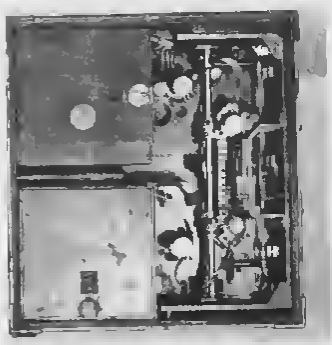


Fig. 17

Of the American made cameras, my pet is the Phantoscope. I believe this one to be the commercial product made by Francis Jenkins who was one of our most promising exponents of the motion picture in its early stages. An original Jenkins 16 lens camera is in the Smithsonian Institute in Washington along with most of his other original experiments. Fig. 16 shows the Phantoscope camera. Then I have what is said to be a Bingham Camera, a heavy weight 500 foot magazine capacity with a most peculiar mechanism. Mechanism moves down drawing film, then pair of pilot claws grab and hold for exposure. And after exposure, claws release by which time mechanism is back up and ready to move down again with film. I have one 400 and one 500 foot magazine capacity camera at each of this one as in Fig. 17. Another pet of mine is the American made Ginett beater movement paper motion picture camera, made expressly for use in amusement parks, where you could get a strip of motion pictures on reversal photographic paper of yourself kissing your best girl, for only a quarter, as in Fig. 18.

I also have the Gillon and Eclair and Lubin cameras which I have since added to my collection but which I have never photographed. Fig. 19 is my collection as it was when this photo was made some time about 1935. In my collection I also have several old time rewinds, measuring machines, some film 35mm. in width no perforations, but on it the first sound made by Mr. Eugene Lauste and some of the wide film motion pictures he made back in 1890. I have tripod heads of old vintage, and many other interesting pieces, as well as a fair collection of still cameras, a collection of which I took up as much as 11 years ago.

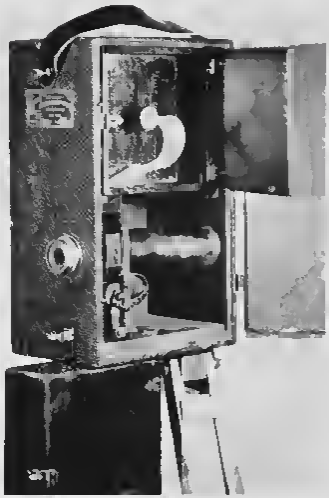


Fig. 18

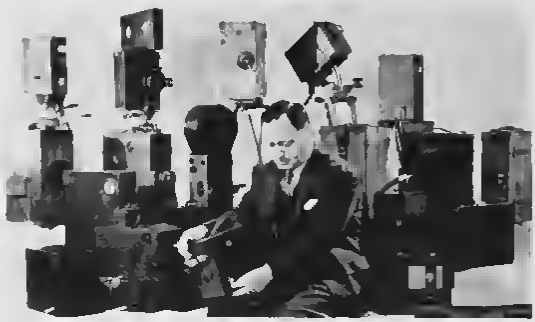


Fig. 19

A.T.&T. Eyes Television

President W. S. Gifford of the American Telephone and Telegraph Company stated in his recent report to the stockholders that as soon as the war is over the company will provide intercity networks—ultimately nation-wide in extent—for television. "We plan to try out short wave radio relay systems for long distance telephone service and for television," he said. "We know that coaxial cable systems—cables which are capable of carrying several hundred telephone conversations simultaneously in two metal tubes a little larger than a lead pencil with a copper wire inside each extending along its axis—work very satisfactorily but we do not know whether or not radio relay systems will work better or prove more economical. We are in the communications business and we intend to use the best and most economical means whether wire or radio."

Television Picture Definition

(Continued from Page 191)

cessive, and serious statistical tests appear to be called for In the meanwhile, the average results of six observers are shown in Table 1.

In consideration of the foregoing remarks it seems legitimate to neglect the a column, and for interim computation purposes a $\frac{1}{1350}$ has been selected as a working figure for the "whole period" acuity of vision

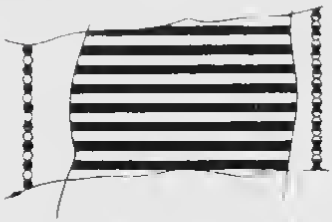


Fig 1 Resolving Power of a Television Picture — left, scanning lines in mesh, right, out of mesh

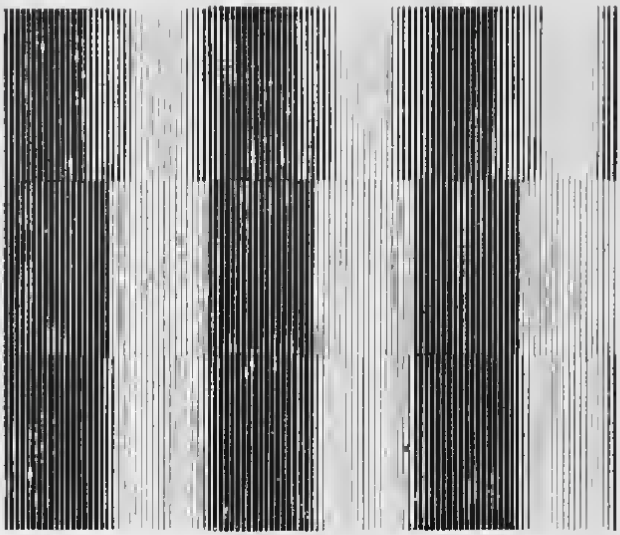


Fig. 2 Resolution Test Chart

Frequency Requirements

We may now examine the numerical implications of this figure as affecting television standards and associated frequency bands.

The first four lines of Table II refer specifically to the television problem, whilst the fifth line gives an estimated comparison for the kinema In the fourth column of the table, the heading N represents the quantity usually referred to as the number of picture points

In line 1, we postulate a vertical viewing angle of 1/6 as adequate for the home viewing case The saturation number of lines for sequential scanning then works out to $\frac{1350 \times 2}{6} = 450$ Taking a 5/4 ratio this leads to a picture point value of 254,000 Assuming a 50 cycle repetition frequency, and with an allowance for masking and flyback, the net picture scanning time is 16 millseconds and the frequency band required 7 94 Mc/s The definition of this picture is saturated

The second line gives the corresponding case for interlaced scanning The number of lines is increased to 675 but the frequency band is reduced to 5 95 Mc/s Again the definition is saturated

The third line shows the pre-war B.B.C service standard of 405 lines gross or 385 lines net The picture point value is 82,000 and the frequency band for which this number of lines is optimum is 1 92 Mc/s The definition of this picture will be saturated at a viewing angle of 1/10 5 which, however, is hardly acceptable as a viewing angle

In the fourth line of the table we set out an estimate of the best that could be obtained economically in terms of present-day technique The number of scanning lines is taken as 525 gross or 500 net, which, incidentally coincides with the standard now adopted by the U.S A The frequency band for which this is an optimum is 3 26 Mc/s, which is obtainable on the existing carrier frequency by use of the vestigial side band method of transmission The picture-point value of this standard is 139,000 and saturation definition is obtained at a viewing angle of 1/8 1. It is admitted that this falls rather short of optimum, but it is considered a satisfactory compromise if it is stipulated that neither delay nor material increase of cost can be tolerated.

Finally, coming to the fifth line of the table, it is estimated that a kinema picture of good definition will admit a viewing angle of ¼ before deterioration of definition is observable It is thus equivalent to 675 lines sequential scanning, or, say, 1,000 lines interlaced scanning The picture point value in this case works out to 600,000 To transmit this picture would require a frequency band of 14 Mc/s Alarming as this figure may be, it presents a technical problem which is small compared with others of the implied project of producing this picture at full kinema size and illumination

Aces of the Camera

(Continued from Page 190)

after the incident of the still he felt he could do no wrong So he was all ready to receive more praise when he saw the same big shot headed in his direction again, and glanced around to count his audience. "Did you fog some film, yesterday?" the big shot wanted to know, glancing ominously at Harry. "Fog? What fog?" Harry spoke up with the manner of a man whose conscience is perfectly clear "The sun was shining yesterday!" And without mentioning any names, but to prove the point that almost everybody had a lot to learn in those days, it must be recorded that the cameraman standing next to him, piped up on Harry's behalf, "You see, he's innocent!"

Harry can yarn by the hour about the fantastic happenings, and the human stories that bring the people and the industry of that era sharply into focus There was the time he was up in Humboldt County, as second cameraman under Frank Urson, with James Cruze directing Wallace Reid, Noah Beery and others in "Valley of the Giants" They were using the railroad depot at Little River station for some of the scenes in the picture, and with the permission of the station agent the film making paraphernalia was spread all over the tracks. A lot of footage had been shot that day, and everyone began to hope that Cruze had had enough But he decided he would get one more scene before the light failed and ordered the cameras reloaded Unfortunately there was no more film But no one wanted to assume the responsibility of having to tell Cruze the sad fact when the nearest supply was several hours away. It was then that Harry had a brainwave Taking the station agent to one side he told him the situation, adding that he was

just a young fellow starting in the film business and would surely lose his job if Cruze found out about the shortage of film. You can save everything, he told the railroad man, if you will only tell Cruze that he will have to clear the track for a train that's due any minute.

The agent got the idea right away. The set was struck, and the situation saved, Noah Beery got an idea too. Taking advantage of the sudden respite he pulled out two thin dimes, and a couple of dice. Without losing the dice, and before the light failed him, he ran that twenty cents up to $80.00; a sum that represented the entire contents of the pockets of those concerned.

It was while they were on location for the same picture that an incident happened that almost brought many a famous career to a sudden and tragic end. Most of the company, including Wally Reid, Noah Beery, Ralph Lewis, Guy Oliver, Grace Darmond, Jack Hoxie, and Harry, were in a caboose on the end of a train of flat lumber cars, being backed down the side of a mountain to a location 8000 feet above sea level. Suddenly, the coupling holding the caboose to the rest of the cars gave way. Before the company could realize what was happening the car was careening madly down the steep mountain decline, lunging crazily around tortuous turns, and throwing its occupants around like scattered duckpins. Then the wheels left the tracks, and with a terrible crash the caboose smashed through a trestle bridge and plunged down into the canyon below.

Inside the car the stove had overturned and spread flames which began to creep toward the injured and unconscious people. It was then that Jack Hoxie played a role more dramatic, more heroic than any he had ever played on the screen. Fighting for breath in the smoke and flame he smashed through the broken side of the car and dragged every member of the company to safety. Miraculously, no one was killed.

Harry Hallenberger learned the business of cameraman the hard way, when a cameraman had to know how to do everything. He had the best teachers in the business. Charlie Rosher and Art Miller in the beginning, and later as assistant to Arthur Edeson when that worthy was training his lense on Jack Holt and Clara Kimball Young.

In 1924 Harry filmed the first Potash and Perlmutter picture for Goldwyn. He filmed Eddie Cantor's "Special Delivery" in 1927. He was with Paramount until 1937, except for nine months with Technicolor during 1929.

For the last seven years he has been freelancing. During that time he has turned in some sterling work on some outstanding pictures. "Wells Fargo", "Arizona", "Louisiana Purchase" with Ray Rennahan, "Women at War", "It Happened in Paris", "China" and "Up in Arms". For his old mentor Arthur Edeson he recently did a color sequence in the musical, "Harvest Moon".

Harry has one of those talents with which Hollywood is so richly blessed, and which makes it possible for this town to be the film capitol of the world. Rich in experience, he is called upon to perform some of the most difficult assignments and can always be relied upon to do them well. He is known in Hollywood as one of the finest exterior photographers in the industry. Couple this with his ability as an interior photographer and an expert in color, and you may well gather that Hallenberger really is a Camera Ace.

DuPont Promotes Brayman

Harold Brayman has been appointed Director of the Public Relations Department of the E I DuPont de Nemours Company, succeeding the late T G Joslin, who died suddenly last April. Brayman has been assistant director since 1942

Monopack Processes

(Continued from Page 200)

hood of 475μ, so here again we can pick a wave length whose absorption by these two will be in the ratio of x_{21}/x_{31}

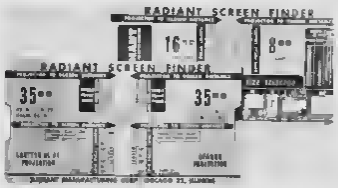
We have made masks whose use enables us to copy the densities present in only one of the layers in the color transparency without interference from the other two This enables us to make color-correct separations The next problem is how to make them properly balanced We turn again to our standard color patch After masking we copy a red density equal to x_{11}, a green density equal to x_{22}, and a blue density equal to x_{31} We know that these values represent something which originally was a neutral that transmitted only 10 per cent of the light incident upon it Therefore x_{11} is the density in the cyan layer which is the image of a density whose value was 1.00 For proper balance, then, the value x_{11} must be copied so that a print made through the negative will yield a density of 1.00 This will be achieved if the red filter separation will be developed to a gramma equal to $1.00/x_{11}$ that of the desired negative gamma Similarly the green separation must be developed to a gamma that is $1.00/x_{22}$ that of the desired value, and the blue separation must be developed to a gamma which is equal to $1.00/x_{33}$ that of the desired value

It should be pointed out that the reproduction process which is to be used does not enter into this discussion at all If any corrections are to be made to compensate for defection in that procedure, they must be made over and above the ones noted here We have merely offered a solution to the process for the making of accurate separations from a color transparency which uses a set of subtractive primaries characterized by the color matrix

$$(\lambda) = \begin{pmatrix} \lambda_{11} & \lambda_{12} & \lambda_{13} \\ \lambda_{21} & \lambda_{22} & \lambda_{23} \\ \lambda_{31} & \lambda_{32} & \lambda_{33} \end{pmatrix} \qquad (12)$$

The above procedure, outlined in great detail in the August and October 1943, issues of *American Photography* represents a theoretical solution In actual practice we can make some short cuts An examination of the actual curves for the subtractive primaries used in Ansco Color or Kodachrome indicates that if the red separation be made with light whose wave length is greater than 650 mμ, it will not be necessary to mask to obtain a separation reasonably free from color distortion A tolerable green separation can be made using light of wave length about 525 mμ It is only the blue separation which must be color corrected, and this can be done by means of a single exposure, as indicated above However, much may be said for the use of 3 masks, as this will reduce the otherwise unreasonable and unreproducable light intensity range of the normal color transparency, which incidentally arises mainly from the deficiencies of the subtractive primaries used.

New Screen Finder



A NEW "Screen Finder" to meet a long-felt need among users of motion pictures, slide films, slides and opaque projectors has just been released by the Radiant Manufacturing Company of Chicago This slide pocket scale, it is claimed, enables any user to obtain perfect projection results by answering important questions quickly and accurately It shows at a glance

1 The proper screen size for each distance between screen and projector with a given lens
2 The proper screen model to select
3 The proper distance between screen and projector to obtain any desired size of picture
4 The proper lens to use to obtain perfect results for each distance
5 Correct show time for 8mm and 16mm silent and 16mm sound films

The Radiant Screen Finder answers "movie" questions on one side and "still" questions on the other

Announce Television Seminar

THE Radio Executives Club of New York has organized a "Television Seminar" which will hold fifteen sessions at which prominent experts will lecture on various phases of television The first session was held on May 18 in New York City Final session will be on August 24

Cameramen Come Through

(Continued from Page 193)

When the First Motion Picture Unit of the Army Air Forces was organized, cameramen out of every major and independent studio were enlisted and put into intensive training for Combat Photography. Cameramen now became gunners trained to shoot bullets of heavy caliber, trained to stop the enemy as well as to photograph his activity and his undoing, and that they have done it well is a tribute to their Commanding Officer. They are credited with Three Messerschmitts shot down. One Focke-Wulf and three Zeros destroyed. One Messerschmitt damaged and two probable Zeroes, and one Jap Tanker.

On April 17th. this year, notice was flashed to the FMPU, that a commendation in the name of the President was given by the War Department to the 9th AAF Combat Camera Unit, which, prior to being sent overseas, was trained and activated at the FMPU, in Culver City.

The 9th was the first Combat Unit trained at the First Motion Picture Unit to be sent overseas to cover the activities of the 9th Air Force.

Major Frank Lloyd's camera unit photographed the history of the 13th Air Force from the Battle of the Northern Solomons to Bougainville. Over 150,000 feet of film was shot during this campaign by an Army Air Force Combat Camera Unit under Major Lloyd's command. While photographing aerial combat, half the Unit, which was sent to the South Pacific after being trained at the First Motion Picture Unit, was decorated and two men, S/Sgt Jack Sterling, former MGM stunt man, and Sgt Richard R. Batcheller, 120 S. Vista, Los Angeles, were credited with probable victories over Japanese Zeros.

One officer, Lt. Harold G. Moran, 4336 Cahuenga Blvd., N. Hollywood, has been reported missing in action. Capt. H. Clark Ramsay, 1944 Laurel Canyon, Hollywood, was severely wounded, and one-third of the command was hospitalized for malaria.

Compiled from reports now available, the list of men and their honors are as follows:

Major Frank Lloyd. Motion Picture Director. Air Medal.

Major John D. Craig, Director and Producer of Adventure Films. Air Medal with 4 Oak Leaf Clusters and Winged Boot, issued by RAF's Late Arrivals Club.

Capt. Clark Gable. MGM Star. Air Medal.

Capt. Emmett Bergholz. RKO Cameraman. Air Medal with 2 Oak Leaf Clusters.

Capt. Ellis W. Carter. Pine-Thomas Cameraman. Air Medal and Presidential Unit Citation.

Capt. Jack Blake. Warner Bros. Cameraman. Air Medal and Purple Heart, and Presidential Unit Citation.

Capt. H. Clark Ramsey. Combat Photographer. Air Medal and Purple Heart.

Capt. Raymond G. I. Fernstrom, A.S.C., Paramount News Reel Cameraman. Air Medal and Purple Heart.

Lt. James Bray. Pathe News Reel Cameraman. Distinguished Flying Cross. Air Medal with 2 Oak Leaf Clusters, 2 Messerschmitts downed.

Lt. Francis J. Burgess. Combat Cameraman. Air Medal. 2 Oak Leaf Clusters.

Lt. Casimer Karas. Combat Cameraman. Silver Star. Air Medal.

Lt. Andrew J. McIntyre. MGM Cameraman. Air Medal.

Lt. Hugh L. Wade. Combat Cameraman. Air Medal. 1 Oak Leaf Cluster.

Lt. Lloyd Ward. Combat Cameraman. Air Medal.

T/Sgt. George Ashworth. Combat Cameraman. Silver Star. D.F.C. and Cluster. Purple Heart. Air Medal and 2 Clusters. 1 Presidential Unit Citation and 1 Jap Tanker.

T/Sgt. Jerry J. Joswick, News Reel Cameraman and only cameraman to go on famous Ploesti raid. Brought back sensational shots of raid afterward shown in every newsreel in America. Distinguished Flying Cross. Air Medal with 1 Oak Leaf Cluster and Presidential Unit Citation. Recommended for Commission.

T/Sgt. Henry J. Ludwin. Combat Cameraman. Air Medal.

T. Sgt. Richard L. Hanks. Combat Cameraman. Air Medal.

S/Sgt. John F. Neistand. Combat Cameraman. Air Medal. 1 Oak Leaf Cluster and Winged Boot.

S/Sgt. Henry M. Temple. Combat Cameraman. Air Medal. 2 Oak Leaf Clusters.

S/Sgt. Milton Rosenblat. Combat Cameraman. Air Medal and 2 Oak Leaf Clusters. Presidential Citation.

S/Sgt. Whitfield P. Davis. Combat Cameraman. Air Medal. Winged Boot.

S/Sgt. Frank W. Goetz. Combat Cameraman. Air Medal. 1 Oak Leaf Cluster. Presidential Citation.

S/Sgt. Alex Kushner. Combat Cameraman. Air Medal. 1 Oak Leaf Cluster. Presidential Citation.

S/Sgt. Joseph Appleton. Combat Cameraman. Air Medal. Purple Heart.

Sgt. Marvin Rosenkrantz. Combat Cameraman. Air Medal. Winged Boot.

Sgt. Lawrence A. Van Dam. Combat Cameraman. Air Medal. Winged Boot.

Haggerson President U.C.C.

Fred H. Haggerson, former Vice President and Director, has been elected President of Union Carbide and Carbon Corporation, succeeding Benjamin O. Shea who has been President since 1941 and now becomes Chairman of the Board. Mr. Haggerson has been associated with Union Carbide and Carbon Company for 25 years.

Denham Lab Getting Equipment

Above, Denham Laboratories

FILM production in England as soon as the war is ended will jump to unprecedented heights, and it is more than likely that many Hollywood cameramen will find themselves in England photographing pictures not only for British film companies, but for American companies as well.

This is the opinion of William Harcourt, Director of the Denham Laboratories, who has been in Hollywood for some time studying new methods and arranging for the building in the Denham Laboratories of developing machinery adequate to care for the expected increase in business.

"Instead of trying to buy developing machinery here and have it shipped", explained Harcourt, "we will make arrangements to obtain the blueprints of the machine we decide upon. Then we will build the machines ourselves and pay a royalty to the owners of the patents."

Harcourt said that Hollywood is far ahead of England in the matter of mechanical improvements and equipment. He also added that in England, due to the war, all the film industry has been able to do is to try to keep whatever equipment they have in running order, with the result that a tremendous amount of equipment will be needed when the war is won.

England will see a big increase in the use of 16 millimeter film, says Harcourt, especially in the educational field. He says he is so sure of it that he is planning to add considerable 16 millimeter processing machinery. Only one half of the large Denham Laboratory building is equipped at present, but on Harcourt's return the entire plant will be set up.

"The thing that most impressed me in Hollywood", said Harcourt, is the wonderful spirit of cooperation shown by everybody in the industry. Every studio and every laboratory opened their doors to me and showed me everything they had in the processing field. I don't believe that would happen in England, believe me."

New Magnesium Film

UNVEILING the interesting process surrounding the production of the lightweight metal magnesium, the Bureau of Mines has announced the release of a new educational sound motion picture, "Magnesium—Metal of the Sea,' which describes how this essential material is created from common sea water and salt brines.

The new film is available free for use by public schools, war-training classes, the armed forces, civic groups, clubs and other organizations. It is in 16mm. sound, and may be obtained by writing to the Bureau of Mines Experiment Station, 4800 Forbes Street, Pittsburgh 13, Pennsylvania.

Saga of Sugar Produced in Color

SUGAR, the whole life-story of this fuel of the human engine," from seed to sucrose, is told excitingly in a 16mm sound-and-color motion picture just produced for the United States Beet Sugar Association by Business Films, of Washington, D C

Opening with a dramatic explanation of the sugar shortage the film reveals how the U. S. turned to its internal sugar supplies on nearly a million acres in 19 states from Ohio to California

N.A.M.C. Looking Up

Lisle Conway, corresponding secretary of the Syracuse Movie Makers Association, writes that the proposed idea of a National Association of Movie Clubs (originated some time ago by the 8-16 Movie Club of Philadelphia) is slowly gaining ground He reports that so far five clubs in the East and Mid-West have evinced interest and have given the "green light" for its formation Also that three other clubs have asked for additional details and are yet to be heard from The four points so far proposed by the clubs in which such an organization could be of service to the movie clubs of the nation are

1—To band together amateur movie clubs of this nation and Canada To promote a better understanding of each other's problems and a better fellowship among these clubs

2—To furnish member clubs with a free exchange film library and a source of tried and tested programs Also to promote a more efficient and rapid, economical method of exchanging films by the use of the "round-robin" method of routing them

3—To provide for those member clubs and their individual members, certain privileges which they, as non-member clubs might not be able to obtain

4—To provide an Amateur News Photo Service for the member clubs and a method of obtaining "stock shots" from any part of the country easily and cheaply

New Filmosound Releases

Bell & Howell Company have announced the following new film releases of the Filmosound Library

THE GREAT IMPERSONATION (Universal) No 2574, 7 reels New streamlined, up-to-the-minute version of E Phillips Oppenheim's classic tale of counter espionage (Ralph Bellamy, Evelyn Ankers, Kaaren Verne) Available from June 19, 1944 for approved non-theatrical audiences

WHEN JOHNNY COMES MARCHING HOME (Universal) No 2444, 8 reels. Hero on furlough tries to avoid being homzed, and comes under the "protection" of hve-wire group of teen-age youngsters (Donald O'Connor, Gloria Jean, Peggy Ryan and Allan Jones) Available from July 1, 1944 for approved non-theatrical audiences

ZAMBOANGA No 5399, 8 reels Highly interesting, dramatic story of life of Moro pearl fishermen All-Filipino production, sounded in Tagalog with good English over-titles. A touching, thrilling, authentic, self-told film story of our heroic allies

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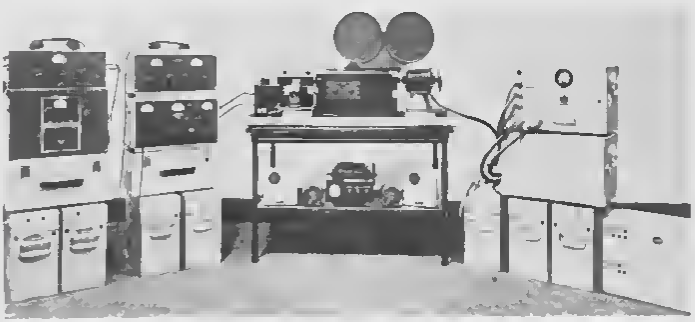

Recording channel now on way to Mexico City where it will be a prime unit of Servicio Cinematografico S A

WITH the local production of motion pictures in Mexico City continuing to mount, E S Gregg, vice president of Western Electric Export Corporation, has announced the closing of recording agreements with two Mexican companies, Servicio Cinematografico S A and the Jenkins interests, which call for the immediate installation of six complete channels of Western Electric recording equipment Servicio provides a recording service to the Clasa and Azteca Studios

"We are glad we are able to assist," Mr Gregg explained, "the trend toward Spanish language production in Mexico and to meet the essential needs of Mexico's fast expanding motion picture requirements We believe our actions will assist in cementing the present favorable relationship between Mexican and American business after the war"

"R O Strock, who for a number of years was associated with Eastern Service Studios and Audio Productions, Inc, of Astoria, Long Island, and subsequently with Export as recording engineer, will go to Mexico City April 25th," Mr Gregg said, "where he will supervise the installation of the new equipment and remain to instruct the staff of Western Electric Company of Mexico in the latest recording techniques He will also assist the studios with the technical side of their production activities"

Princeton Film Center Seeks Hollywood Technicians

GORDON KNOX of The Princeton Film Center, visited Hollywood recently to negotiate production of additional aircraft indoctrination films by that organization, and to secure technicians for his New Jersey plant The film Center is now active in the production of distribution of pictures dealing with the Boeing Flying Fortress, Bell Airacobra, Consolidated Liberator, and other Army and Navy aircraft

Color Coming Into Own After War

POSTWAR planning now being done by the producing companies has one point in common, according to Dr Bela Gaspar, inventor of the color process bearing his name, who recently completed a survey of such plans

"All of the companies are looking forward and working to the day when color will largely displace black-and-white on the nation's screens" he says "Thus far, experimental work has been limited by several factors notably the raw stock and equipment shortage As those conditions change, and especially when the war ends, I expect to see phenomenal strides taken on all hands in the field of motion picture color"

Dr Gaspar predicts no overnight switch from the black-and-white medium, if only because all companies have huge investments in lab processing equipment for such footage

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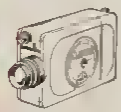

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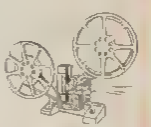

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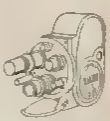

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